

# Receiving Report

Date: 14/8/28

Batch No: WES/30229

Supplier: B. REEDERS

Dart P/O: 25085

Packing Slip: Yes  No   
 Invoice: Yes  No   
 Receipt: Cash  Cr   
 New Supplier Yes  No

Release Note Attached: Yes  No  N/A   
 Waybill Attached: Yes  No   
 Shipment Complete: Yes  No  N/A   
 QC18 Inspection \_\_\_\_\_  
 Work Order \_\_\_\_\_

## Discrepancies

Part Number	Description	Quantity Ordered	Quantity Rec'd	Quantity Short	Quantity Inspected	Quantity Rejected	Comment / NCR Number

Initials of Receiver

QC12

Production/Admin:

Date \_\_\_\_\_

Received/Costing \_\_\_\_\_

Initial \_\_\_\_\_

Location \_\_\_\_\_



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

### \*\*\*PO REPRINT\*\*\*

Purchase Order ID PO25555

Purchase Order Date 8/27/2014

PO Print Date 8/29/2014

Page Number 1 of 2

**Order From :**  
B/E AEROSPACE INC  
88289 EXPEDITE WAY  
CHICAGO, IL 33172  
USA

VU-BEA001      **Ship To :** DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	305-925-2600	Customer POID	
Ship To Contact		Customer Tax #	10127-2607
Ship To Phone		Terms	Net 30
Ship Via	FedEx Overnight collect	Currency	USD
Ship Acct		FOB	FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req. Qty/ Unit of Measure	PO Unit Price	Extended Price
1	MS27039-08-07	SCREW	8/29/2014 Yes 8/29/2014	200.00 Each		\$0.13	\$26.00
2	MS27039-1-16	Screw	8/29/2014 Yes 8/29/2014	200.00 Each		\$0.15	\$30.00
3	MS20470AD4-4	Rivet, Universal Head	8/29/2014 Yes 8/29/2014	5,454.00 Each		\$0.01	\$57.00

Note:

8/27/2014

8/28/2014



# B/E Aerospace, Inc.

## CONSUMABLES MANAGEMENT

Tel: +1.305.925.2600 • Fax: +1.305.507.7191 • [www.beconsumables.com](http://www.beconsumables.com)

Remit to Address: 88289 Expedite Way, Chicago, IL 60695-0001

Wire Instructions: B/E Aerospace Consumables Management • JPMorgan Chase Bank New York  
ABA: 021000021 • Account: 304639273 • SWIFT: CHASUS33 • CHIP UID: 0002

INVOICE NUMBER

HW04RW

PAGE 1

SOLD TO:

002409  
DART AEROSPACE LTD  
1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7

SHIP TO:

DART AEROSPACE LTD  
1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7

ORDER NO.	DATE	SHIP VIA	TERMS			SHIPPING TERMS	
PO25555	08/27/14	FEDX INTL P1 COLL	NET 45			FOB-CARSON	
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION	PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
1	200	MS27039-0807 Description SCREW ECCN : 9A991 MFR: LFC INDUSTRIES CTRL#: 2013K19536 LOT#: 52995 LOT QTY: 200 Country of Origin: USA	0.130	EA	0	200	26.00
		These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to U.S. law is prohibited.					
		<b>FREIGHT ACCT# 15179324-0</b> <b>TEL# 613-632-3336</b>					
INVOICE#.....	.....	HW04RW					
ORDER#.....	.....	97HLA9					
vev	97HLA9	SHIPPED ON 08/27/14					
SUBTOTAL : 26.00 HANDLING : 0.00 DISC/ALL : 0.00 INCM FRT : 0.00 FREIGHT : 0.00 TOTAL : 26.00USD U.S. CURRENCY							

MATERIAL TO BE RETURNED MUST HAVE PRIOR AUTHORIZATION BY B/E AEROSPACE

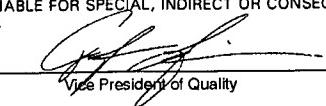
ALL ITEMS ARE SUBJECT TO A 100% RESTOCKING CHARGE.

SHIPPED FROM: 1351 CHARLES WILLARD ST, CARSON, CA 90746

**MATERIAL CERTIFICATION:** B/E AEROSPACE, INC. ("B/E AEROSPACE") WARRANTS THAT THE ITEMS SUBJECT OF THIS INVOICE WILL BE FREE FROM DEFECTS OF MATERIAL AND WORKMANSHIP AND, AS SET FORTH ON THE MATERIAL CERTIFICATION FORM ACCOMPANYING THE ITEMS SUBJECT OF THIS INVOICE, ARE IN CONFORMITY WITH ALL CURRENT GOVERNMENTAL REQUIREMENTS AND THE SPECIFICATIONS OF THE RESPECTIVE MANUFACTURERS. B/E AEROSPACE DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ALL WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE. THE LIABILITY OF B/E AEROSPACE IS EXPRESSLY LIMITED EXCLUSIVELY TO REPLACEMENT OF ANY ITEM WHICH IS REJECTED BECAUSE OF A DEFECT IN MATERIAL OR WORKMANSHIP SUCH REPLACEMENT SHALL CONSTITUTE SATISFACTION OF ALL LIABILITY B/E AEROSPACE MAY HAVE IN CONNECTION WITH SUCH ITEM, WHETHER LIABILITY IS BASED UPON CONTRACT RIGHTS, NEGLIGENCE, OR OTHERWISE, AND IN NO EVENT SHALL B/E AEROSPACE BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES. FURTHER, B/E AEROSPACE MUST BE NOTIFIED OF A REJECTION OF AN ITEM WITHIN 30 DAYS AFTER RECEIPT BY THE CUSTOMER.



## PACKING SLIP

  
Vice President of Quality

BY RECEIVING DELIVERY OF THE ITEMS COVERED BY THIS PACKING SLIP, BUYER AGREES TO THE TERMS AND CONDITIONS OF SALE AT:  
[http://www.beconsumables.com/cm/conditions\\_of\\_sale.cfm](http://www.beconsumables.com/cm/conditions_of_sale.cfm)





**LFC** industries  
A Division of RKR Technologies, LTD  
manufacturer of precision aerospace fasteners

1221 Corporate Dr. W • P. O. Box 5982  
Arlington, Texas 76006 (817) 640-1322

B/E Aerospace, Inc. - Consumables Management  
Self Release. Date: 11-19-13  
Signature and Stamp:

*Elaine Guare*



## SHIPPING REPORT

52995

PRODUCTION ORDER # 52995  
COUNTRY OF ORIGIN: USA

S  
H  
I  
P

B/E AEROSPACE, INC.  
CONSUMABLES MANAGEMENT  
9835 N.W. 14TH ST.  
MIAMI, FL 33172

SHIPPING METHOD	FedEx FRT	
PAID	COLLECT	<input checked="" type="checkbox"/>
ORDER NO	OMJF71	
PART NO	MS27039-0807	
ITEM#	1	
QTY	3	
QTY. DUE	250000	
SHIP TOL	+0-5%	
DATE DUE	10-15-2013	

ECCN: EAR99, SCHEDULE B #7318.15.2000

### COMMENTS



DFAR 252-225-7009

RETURN OF ANY MERCHANDISE LISTED HEREON WILL NOT  
BE ACCEPTED WITHOUT PRIOR AUTHORIZATION

**CERTIFICATE OF CONFORMANCE**  
THE MATERIALS, PROCESSES AND PARTS FURNISHED  
WERE PRODUCED IN ACCORDANCE WITH APPLICABLE  
SPECIFICATION REQUIREMENTS, AND TEST REPORTS INDICATING CONFORMANCE ARE  
ON FILE SUBJECT TO EXAMINATION. OUR Q.C.  
INSPECTION SYSTEM CONFORMS TO ISO 9001.

SIGNED

*Elaine Guare*

PARTIAL

COMPLETE

QTY  
SHIPPED

250000

QTY  
CONTAINERS:

35

LBS. PER MT:

3,588.12

GROSS  
WEIGHT:

1008.81

PCS USED TO  
ESTABLISH WT:

50

TARE  
WEIGHT:

36.75

NFT  
WEIGHT:

972.06

SHIPPING  
CLERK:

*RW*

DATE

11-19-13

CONSIGNEE  
SIGNATURE:

DATE



# B/E Aerospace, Inc.

Page: 1 of 1

## CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
[www.beconsumables.com](http://www.beconsumables.com)

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172

### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: P02555**

LINE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
3	3	LB	MS20470AD4-4		S131023011L	ALLFAST FASTENING	53551		08/27/14

  
Jason Lewis  
Vice President of Quality

08/27/14

# **ALLFAST**

## **FASTENING SYSTEMS, INC.**

P.O.Box 3166 - 15200 Don Julian Road  
City Of Industry, California 91745-1098  
Phone (626)968-9388 - Fax (626)968-9393  
[www.allfastinc.com](http://www.allfastinc.com)

### **CERTIFICATE OF CONFORMANCE**

DATE: 01/28/2014

CUSTOMER NAME: B/E AEROSPACE

PURCHASE ORDER: OMYS30

PART NUMBER: MS20470AD4-4 REV: 2

LOT CONTROL NUMBER: S131023011L

MATERIAL LOT NUMBER: S303813

MATERIAL VENDOR: KAISER ALUMINUM FAB. PROD. LLC MATERIAL TYPE: 2117-T4

CERTIFICATION NUMBER: 000160746

NOMENCLATURE: Solid Rivet

QUANTITY: 480 LB

SHIPPER NUMBER: 99296161525

DATE OF MANUFACTURE: 10/15/2013

HEAT LOT NUMBER: K851476

PROCUREMENT SPECIFICATION: NASM5674 REV. 1

SHEAR STRENGTH REQUIRED: 26,000 PSI MIN.

SHEAR TEST RESULTS:	1: 34,891 PSI	2: 34,300 PSI
	3: 32,774 PSI	4: 35,290 PSI
	6: 33,527 PSI	7: 33,883 PSI
	9: 34,907 PSI	10: 35,378 PSI

DIMENSIONAL INSPECTION

SAMPLE SIZE: 50

RESULTS: ACCEPTABLE

ASTM GRAIN SIZE #:7.5

DRIVEABILITY: ACCEPTABLE

FINISH: MIL-DTL-5541 REV. F, CLASS 1A, GOLD

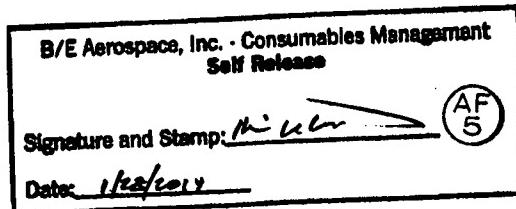
COMMENTS: ECCN #9A991.

The undersigned hereby certifies that the product(s) supplied herewith were manufactured and inspected in accordance with all applicable drawings and specifications, and conforms to all applicable government and/or customer requirements. All supporting documentation is on file and is available for review upon request.

The aforementioned items were manufactured by Allfast Fastening Systems, Inc at 15200 Don Julian Road, City of Industry, California 91745.

This certification shall not be reproduced, except in full, without written approval of Allfast Fastening Systems, Inc. Recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under federal law.

Country of origin: USA



*W. Whitman* /  
QUALITY ASSURANCE REPRESENTATIVE

Page 1 of 1

MANUFACTURERS OF AIRCRAFT AND COMMERCIAL FASTENERS

S303813

## **CERTIFIED INSPECTION REPORT AND TEST RESULTS**

**KAISER ALUMINUM**

**1547 Helton Drive - Florence, AL 35630**

SEP 27 2013



**SHIP TO:**  
**ALLFAST FASTENING SYS. INC**  
**370 TURNBULL CANYON ROAD**  
**CITY OF INDUSTRY, CA 91745**

**SOLD TO:**  
**ALLFAST FASTENING SYS. INC**  
**P.O. BOX 3166**

CITY OF INDUSTRY, CA 91745-10

Customer PO Number 117496-76		NW WORK ORDER NO. 12570	<i>Dave Hildin</i>
<b>DESCRIPTION</b> .1265 2117 H15 30" 800# STEM		<b>AUTHORIZED SIGNATURE</b> <b>QUALITY CONTROL MANAGER</b>	
CUSTOMER PART NO.	ALLOY 2117	TEMPER H15	We hereby certify that the material covered by this report has been inspected in accordance with, and has been found to meet, the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown on this sheet.
NW PART NO. G12651		DATE SHIPPED 9/10/2013	
WEIGHT SHIPPED 5.214			

		ULTIMATE		YIELD		% ELONGATION	
LOT NUMBER	# OF TESTS	STRENGTH K.S.I.		STRENGTH K.S.I.			
		Min	Max	Min	Max		
K851476	6	32	33				

**COMMENTS:**

M-151-4 REV K

QQA-430C

MILL SOURCE KAISER

**MADE IN USA**

**GRAIN SIZE 6 OR FINEER**

**ALLOY VERIFICATION  
HAS BEEN PERFORMED**



grain size: 2.5



*Beth in  
Gass*

S303813 AF 92

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

Kaiser Aluminum Fabricated Products, LLC  
600 Kaiser Drive  
Heath, OH 43056-1088  
740-522-1151

CUSTOMER PO NUMBER:		CUSTOMER PART NUMBER:		PRODUCT DESCRIPTION:							
FLO-1969		6G37L1		ALY-JUMBO							
KAISER ORDER NUMBER:	LINE ITEM:	SHIP DATE:		ALLOY:	TEMPER:						
624556266	1	08/21/2013		2117	O						
WEIGHT SHIPPED:	QUANTITY:	B/L NUMBER:		DIAM/DAF/THKNS:	WIDTH:	LENGTH:					
5255 lbs.	23 pcs.	7670		0.375 in.	0.000 in.	0.0 in.					
SHIP TO:				SOLD TO:							
FLORENCE 1547 HELTON DRIVE FLORENCE, AL 35630				FLORENCE 1547 HELTON DRIVE FLORENCE, AL 35630							

Test Code: 8000

Actual Physical Properties

Lot No.	No. Tests	WGU ksi
851476	3	MIN 22.1 MAX 22.5

Chemical Composition, WT. % (Aluminum Remainder)

Lot Cast/Drop ChemID	Si	Fe	Cu	Mn	Mg	Cr	Zn
851476							
73-3F2	Act.	0.40	0.40	2.8	0.16	0.40	0.06
183514							0.11
Chemical Limits	Min			2.2		0.20	
	Max	0.8	0.7	3.0	0.20	0.50	0.10
	Others	Each	0.05	Max		Total	0.15 Max

Specifications

QQA-430

Plant Serial: 32151  
Kaiser Order Number: 624556266  
Line Item: 1



Kaiser Aluminum Fabricated Products, LLC  
600 Kaiser Drive  
Heath, OH 43056-1088  
740-522-1151

S303813 AF 92

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

Miscellaneous Notes

Made in USA

Mercury is not a normal contaminant in aluminum alloys. Neither mercury nor any of its compounds were utilized by Kaiser Aluminum in the manufacture of this material. Actual (Act) chemical composition is from representative samples taken during the ingot casting process. Independent chemical analysis will vary from these values because of natural variation in the process and testing error. This test report shall not be reproduced, except in full, without the written approval of Kaiser Aluminum. The recording of false, fictitious, or fraudulent statements or entries on the certificate may be punished as a felony under federal law. Chemical analysis performed in accordance with ASTM E 1251-11. The Newark facility is AS9100C:2009 approved. The Newark Laboratory is NADCAP approved for chemical testing (OES).

CERTIFICATION

Kaiser Aluminum Fabricated Products, LLP ("Kaiser") hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales order acknowledgement form. Any warranty is limited to that shown on Kaiser's standard general terms and conditions.

Warren Marcucci, Technical Manager

Plant Serial: 32151  
Kaiser Order Number: 624556266



# B/E Aerospace, Inc.

Page: 1 of 1

## CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
[www.beconsumables.com](http://www.beconsumables.com)

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172

### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO25555**

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
2	200	EA	MS27039-1-16		65251	MAC FASTENERS	ORFT4		

  
\_\_\_\_\_  
Jason Lewis  
Vice President of Quality

08/27/14

**MAC FASTENERS, INC.  
1110 ENTERPRISE  
OTTAWA, KANSAS 66067**

**CERTIFICATE OF CONFORMANCE  
AND  
MANUFACTURER'S AFFIDAVIT**

CUSTOMER: B/E AEROSPACE

PO: 0LFV64

PART NUMBER: MS27039-1-16

REV: 3

LOT NUMBER: 65251

MANUFACTURED QUANTITY: 150,000

MILL HEAT NUMBER: 8172012

COUNTRY OF ORIGIN: UNITED STATES OF AMERICA

DFARS 252.225.7009 Compliant

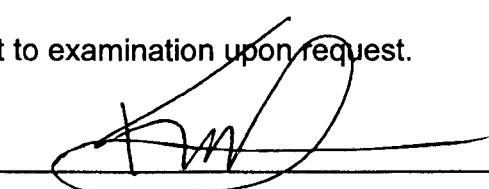
**MERCURY FREE CERTIFICATION**

MacFasteners Inc. certifies that the parts referenced in the above lot number do not contain Mercury or Mercury compounds, and were manufactured in a Mercury free environment.

We certify that the parts furnished against the above referenced purchase order were manufactured by MAC FASTENERS, INC. within the United States, and were processed in accordance with all applicable drawings and specifications.

Objective evidence of compliance is on file, subject to examination upon request.

DATE: 07/24/13

  
QUALITY ASSURANCE REPRESENTATIVE

**MAC FASTENERS, INC.**  
**1110 EAST ENTERPRISE**  
**OTTAWA, KS 66067**

## **CHEMICAL & PHYSICAL TEST REPORT**

CUSTOMER B/E AEROSPACE				PO NUMBER 0LFV64				MFG QUANTITY 150,000			DATE 07/24/13		
PART NUMBER MS27039-1-16				REV 3	LOT NO 65251			PROCUREMENT SPEC NASM7839					

MATERIAL TYPE 8740				MATERIAL SPECIFICATION MIL-S-6049/AMS6322				MILL HEAT NUMBER 8172012				SUPPLIER JOHNSTOWN		
C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	B	Fe	Al	Ti	
.42	.25	.87	.008	.013	.07	.43	.49	.21	.003			.031		
	Co	N	Bi	Pb	Mg	Zn		Nb	Sn			Other		
			.0060						.005					

### **MECHANICAL TEST RESULTS - TESTING PER NASM1312**

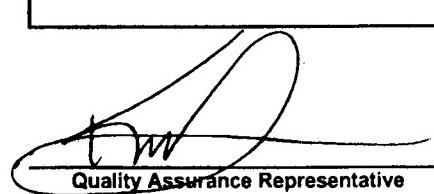
ULTIMATE TENSILE STRENGTH POUNDS		DOUBLE SHEAR STRENGTH POUNDS / PSI		HARDNESS	
3,070	3,080	4,800	4,790	ROCKWELL "C" SCALE	
3,070	3,060	4,790	4,810	REQ.	26 - 32 HRC
3,070	3,060	4,810	4,810	SAMPLE SIZE	13
3,080	3,050	4,780	4,820	ACTUAL RESULTS	
3,050	3,070	4,800	4,800		26 - 31 HRC
3,070		4,800			
3,070		4,810			
3,060		4,780			
MIN. REQ.	2,500	MIN. REQ.	4,250		

METALLURGICAL EXAMINATION			
Discontinuities	<input checked="" type="checkbox"/>	Carb/Decarb	<input checked="" type="checkbox"/>
Grain Flow	<input checked="" type="checkbox"/>	Microstructure	<input checked="" type="checkbox"/>
Grain Size	<input checked="" type="checkbox"/>	Appearance	<input checked="" type="checkbox"/>
Thread Inspection FED-STD-H28/20 - ASME B1.3	System <input type="checkbox"/> 21	System <input checked="" type="checkbox"/> 22	System <input type="checkbox"/> 23

### **TEST CERTIFICATION**

WE CERTIFY THAT THE PART NUMBER, LOT NUMBER, AND SAMPLES REFERENCED ABOVE HAVE BEEN TESTED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATION

FOR THE TESTS REPORTED HEREIN. THIS CERTIFICATION SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE APPROVAL OF MAC FASTENERS, INC.



Quality Assurance Representative

AS9100C REGISTERED  
SAI GLOBAL - 0058029

MAC FASTENERS, INC.  
1110 ENTERPRISE  
OTTAWA, KANSAS 66067

## HEAT TREAT CERTIFICATION

CUSTOMER: B/E AEROSPACE

DATE: 07/24/13

PO NUMBER: 0LFV64

MANUFACTURED QUANTITY: 150,000

PROCESSOR:

PAULO PRODUCTS KCMO - NADCAP ID 4679

LOT NUMBER: 65251

MATERIAL: TYPE 8740

PART NUMBER: MS27039-1-16

REVISION: 3

REQUIRED HARDNESS: 26 - 32 HRC

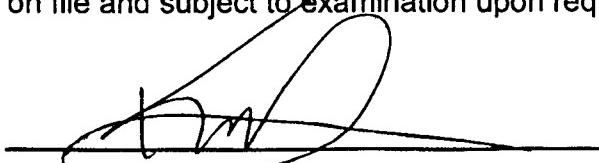
SAMPLE SIZE: 13

HARDNESS: 26 - 31 HRC

HEAT TREAT SPECIFICATION AS APPLICABLE: MIL-H-6875/AMS-H-6875/AMS2759/AMS5853/PS-1001

Notes:

The fasteners referenced in this report have been processed, inspected and certified by the Heat Treat Contractor in accordance with all applicable drawings and specifications. Heat Treatment has been verified in accordance with procurement specification and part drawing, by metallurgical and mechanical testing as applicable. Evidence of compliance as well as certification from the Heat Treat Contractor is on file and subject to examination upon request.



QUALITY ASSURANCE REPRESENTATIVE

COMMERCIAL PLATING COMPANY

TC-4500 XRF ST

Wed Mar 19 01:09:04 1997

COMMERCIAL PLATING CERTIFICATION AND TEST RESULTS

This is to certify that the order described below was plated to comply with the agreed upon requirements of the requested specification.

DATE: 07/17/13

CUSTOMER: MAC FASTENERS

PART NUMBER: MS27039-1-16

DESCRIPTION: SCREW

ORDER NUMBER: 88022

LOT NUMBER: 65251

TOTAL WEIGHT: 1306 LB

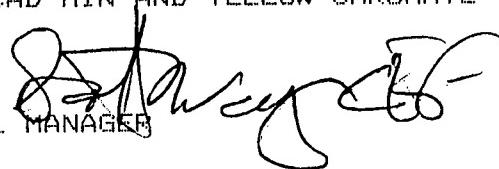
PIECES PLATE TO GAUGE: Y

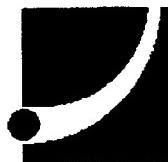
SPECIFICATION: SAE AMS QQ-P-416C, TYPE II, CLASS 2

REQUIREMENTS: 0.0003 CAD MIN AND YELLOW CHROMATE

AUTHORIZED SIGNATURE:

TITLE: QUALITY CONTROL MANAGER





**Johnstown  
Wire  
Technologies**

SOLD TO

**Mac Fasteners, Inc.**  
C/O TD Logistics Inc.  
14505 W 100th Street  
Lenexa, KS 66215  
USA

124 Laurel Ave,  
Johnstown, PA 15906

Phone: 814-532-5680  
Fax: 814-532-5684

WORK ORDER  
**683779**

**TEST REPORT**

LOT NUMBER

**K-8172012**

SALES ORDER / RLS

**001179 / 1**



CUSTOMER P.O.	CUSTOMER PART		QUANTITY		COILS	LADING NO	SHIPMENT DATE					
<b>50516</b>			<b>24,038 LBS</b>		<b>12</b>	<b>00117025</b>	<b>04/26/2013</b>					
<b>SPECIFICATION MacFast-87186</b>												
<b>AMS2301; AMS6322; AMS-S-6049A; MIL-S-6049A 8740 DFARS Defense Federal Acquisition Regulation Supplement Silicon Killed Fine Grain Aircraft Quality/Cold Heading Quality Drawn From Annealed Rod Spherodize Annealed In Process Heavy Phos &amp; Light Lube Ctd</b>												
<b>Size: .1865 +.001 -.000</b>												
<b>CERTIFICATION REQUIREMENTS</b>												
<b>Chemical</b>												
C	Mn	P	S	S1	Al	Ni	Cr	Mo	Cu	V		
.42	.87	.008	.013	.25	.031	.43	.49	.21	.07	.003		
Cb	Ti	N	Sn									
.001 ????????		.0060	.005									
<b>Physical</b>												
AMS 2301	J1	J10	J11	J12	J2	J3	J5	J4	J6	J7	J8	J9
0000	57	37	35	34	56	55	53	55	50	46	42	39
<b>MacroClean E-381</b>												
111												
<b>Mechanical</b>												
TEST	UNITS		HIGH		LOW		AVERAGE					
Tensile Str	Lbs/SqIn		86000		82000		84000					
RA Per Cent	Percent		75.7		71.3		73.2					
Decarb FFD	Inches		.000		.000		.000					
Surface def. depth	Inches		.001		.001		.001					
<b>Rod / Melt Source</b>												
Rod Source	Melt Source		Country of Origin		Nafta							
Republic	Republic		USA		Yes							
End of Certification												

I certify that the results are a true and correct copy of the records prepared and maintained by JOHNSTOWN WIRE TECHNOLOGIES in compliance with the requirements of the cited specification. Chemistry is as reported by the rod / bar supplier and is not in JWT A2LA accreditation. This test report cannot be reproduced or distributed except in full without the written permission of JOHNSTOWN WIRE TECHNOLOGIES. The test results certified herein relate only to the items tested.

*Daniel J. Mallik*  
Daniel J. Mallik, Director of Quality Assurance



## CERTIFICATE OF TESTS

1007 EAST 28TH ST.  
PHONE: 330-438-8495LOMIAH, OH 44055  
FAX: 330-438-8495

REPUBLIC STEEL

2/27/2013  
2:38:00 PM  
PAGE 1 OF 2PURCHASE ORD: 83625  
PART NUMBER: FXT40AA-.3125  
ORDR NUMBER: 1539858 - 01  
HEAT: 8172012PURCHASE ORDER DATE: 12/21/2012  
ACCOUNT NUMBER: 5672-1920-01  
SCHEDULE: 0354-93  
REVISION: 1

CHARGE ADDRESS SHIP TO

JOHNSTOWN WIRE TECHNOLOGIES  
124 LAUREL AVE  
JOHNSTOWN, PA 15906JOHNSTOWN WIRE TECHNOLOGIES  
EDWARD ZAPOLA  
124 LAUREL AVE  
TRUCK STPO 9 ROD DOCK  
JOHNSTOWN, PA 15904MATERIAL DESCRIPTION  
HOT ROLLED STEEL COILS ALLOY AMS 2301K JOHNSTOWN WIRE SPEC RW-100 REVISION DTD 04/21/04 EXC PARA  
10.3 AMS 6322N EXC HARD JOHNSTOWN WIRE SPEC RW-005 REVISION DTD 12/31/00 EXC SURFACE DEFECTS  
JOHNSTOWN WIRE SPEC PART NO. FXT40AA REVISION DTD 12/31/00 MIL S 6049A & AMD 1 COND B-1 EXC MARK &  
UT WAIVED RF-AISI-8740-H FINE GRAIN VACUUM DEGASSSED AIRCRAFT QUALITY FIXED PRACTICE QUALITY  
RESTRICTED CHRMISTRY RESTRICTED MAX INCIDENTAL ELEMENTSSIZE: RDS .3125 DIAM X COIL  
RDS 7.9375MM DIAM X COIL

## LADLE CHEMISTRY %

C	MN	P	S	SI	CU	NI	CR
0.42	0.07	0.008	0.013	0.25	0.07	0.43	0.49
V	MO	SN	AI	B	CB	N	

## CALCULATED TESTS

REDUCTION RATIO 1,690.4 TO 1

AUSTENITIC GRAIN SIZE 5 OR FINER BASED ON A TOTAL ALUMINUM CONTENT EQUAL TO OR GREATER THAN .020% PER ASTM  
A29.

## SEMI - FINISHED RESULTS

## JOMINY HARDNESS TEST SAE J406/ASTM A255

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18 20 22 24 26 28 30 32  
57 56 55 55 53 50 46 42 39 37 35 34 33 32 31 31 30 29 29 28 27 28 27 27

## MACRO ETCH TEST ASIM E381/MIL STD 430

ETCHANT: HCL TEMPERATURE: 170

S R C  
AVG 1 1 1

## MAGNETIC PARTICLE TEST AMS 2301 AMS2304 AMS2300

IND AVG IND AVG  
FREQ FREQ SEV SRV  
PCE 03 0 0 0 0

## FINISHED SIZE RESULTS

## DECARBURIZATION TEST SAE J419/ASTM E107/JIS G0558

ETCHANT = NITAL MAGNIFICATION = 100X

SPIKE COMPLETE TOTAL  
INCHES INCHES INCHES  
PCE 2394 0.002 0 0.002G. KRUTH BY DEBORAH STOKES  
DIRECTOR QUALITY ASSURANCE



## CERTIFICATE OF TESTS

1807 EAST 28TH ST.  
PHONE: 330-438-8580LORAIN, OH 44059  
FAX: 330-438-8495

REPUBLIC STEEL

2/27/2013

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PAGE 2 OF 2

PURCHASE ORD: 83625  
PART NUMBER: FXT40AA-.3125  
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ACCOUNT NUMBER: 5672-1920-01  
SCHEDULE: 0354-93  
REVISION: 1

CAPABLE OF SEAM DEPTH 1% MAX DIAMETER NOT LESS THAN .005 MAX

NOTES

CHEMICAL ANALYSIS CONFORMS TO APPLICABLE SPECS: ASTM E415, LBL10129, LBL10130, ASTM E1019,  
LBL10158, LBL10114, AND ASTM E1085, LBL10184, LBL10188.

REPUBLIC STEEL HEREBY CERTIFIES THAT THE MATERIAL LISTED HEREIN HAS BEEN INSPECTED AND TESTED IN

NOTES (CONTINUED)

ACCORDANCE WITH THE METHODS PRESCRIBED IN THE GOVERNING SPECIFICATIONS AND BASED UPON THE RESULTS OF  
SUCH INSPECTION AND TESTING HAS BEEN APPROVED FOR CONFORMANCE TO THE SPECIFICATIONS.

CERTIFICATE OF TESTS SHALL NOT BE REPRODUCED EXCEPT IN FULL.

ALL TESTING HAS BEEN PERFORMED USING THE CURRENT REVISION OF THE TESTING SPECIFICATIONS.

RECORDING OF FALSE, PICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED  
AS A FELONY UNDER FED STATUTES TITLE 18 CHAPTER 47.THE MATERIAL WAS NOT EXPOSED TO MERCURY OR ANY METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURE  
DURING PROCESSING OR WHILE IN OUR POSSESSION.

NO WELD OR WELD REPAIR WAS PERFORMED ON THIS MATERIAL.

THE RESULTS REPORTED RELATE ONLY TO THE ITEMS TESTED.

----- SOURCE INFORMATION -----

MELT SOURCE: CANTON CAST ROLL MELT COUNTRY: U.S.A HOT ROLL SOURCE: LORAIN 9/10, U.S.A

MELT METHOD: EF BLOOM RED. RATIO: 1690.4

----- END OF DATA -----

----- CC -----

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FAX SHIP TO 1 COPY ATTENTION EDWARD ZAPOLA 1-814-532-5684  
FILE 1 COPYG. KRUTH  
DIRECTOR QUALITY ASSURANCE

BY DEBORAH STOKES